

Bulletin

A New Public Works Degree Program and Courses Available!

As noted in the Fall T² "Bulletin," a new Associate of Technical Arts in Public Works (ATAPW) is now available. Offered through South Puget Sound Community College with some courses scheduled for Bates Technical College, the new program provides the opportunity to earn an associate degree with various specialities of study.

Many courses offered by our community college system should be compatible with those at South Puget Sound Community College. With the help of an advisor, a student majoring in public works many choose a sequence of electives

aligned with one of the following emphasis areas.

- 1 Administration and management (in Public Works).
- 2 Planning.
- 3 Water and wastewater.
- 4 Construction, maintenance, and inspection.
- 5 Surveying, mapping, and geographic information systems (GIS).
- 6 Ground and building maintenance.

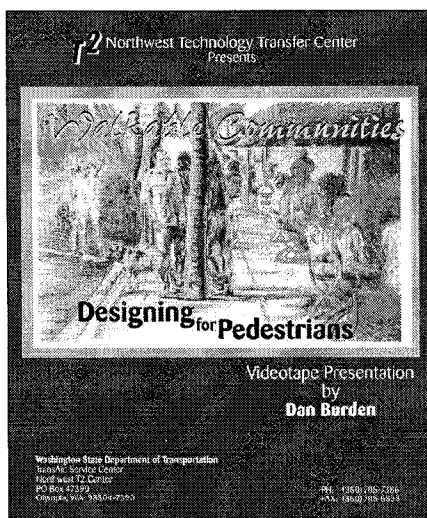
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The Northwest Technology
Transfer Center
TransAid-WSDOT

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Walkable Communities: Designing for Pedestrians

See page 4!

Editor's Column

1997 looks like it will be another very active year for your T² Center. Training, technical materials, and technical advice will continue to be our emphasis areas with partnering and cooperation the tools to provide the best quality of service. The survey of customers in 1996 will be a barometer to guide us.

Perhaps the hardest thing for any of us to do is to keep you up-to-date in this informational society. There's so much information on all subjects that to sort out what's good and worth our time becomes a daily routine for many. Everywhere change is in the wind and it always has been. Things that work well will and should continue.

We will try our best to help you in sorting out pertinent and worthy information whether it be articles in this newsletter or technical materials which we provide free to you.

Our roadshows will continue to provide you and your staff an opportunity to get some informal training whether its maintenance, construction, or design related. Please use the roadshows to share information and take advantage of the experience and expertise of our roadshow trainer. They all have "been in the trenches" like you.

Our workshops for 1997 will key on bringing back those that are still rated highly by you and those that can be used to refresh skills. We also will keep you posted on training opportunities by others that are related to public works.

Note the article on page 1 of this newsletter where we now have a new degree program for public works in the state. This new program can help local agencies enhance the employees skills. It's awaiting applicants.

In summary, I envision 1997 to be another year of challenges, and of progressive changes in technology transfer.

A. erge

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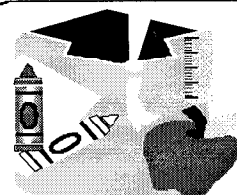
People interested in the design aspects of public works can take the two-year civil engineering program offered at many of the state's community colleges. These courses strongly emphasize the design aspects of public works whereas the Associate of Technical Arts in Public Works emphasize the other areas.

College staff have expressed their intentions to make this pilot program a success. They are considering classes after working hours, condensed classes (weekends, etc.), credit for courses from other colleges, and other ways to make it easier for a student to complete the required course material and earn an ATAPW. In addition, some people may just want to improve their skills. Courses like "Public Works Safety" and "Management of Local Public Works," which are part of the curriculum, may be good refreshers also.

The 1997-99 college catalog will list this new associate degree program. Implementation of specialized courses is anticipated in the fall of 1997. Anyone interested in teaching some speciality public works courses should contact the college at (360) 754-7711, ext. 207. These courses may include public works safety, management of local public works, wastewater basics, water works basics, and others. The texts for many of these special courses are available. For example, the International City/County Management Association (ICMA), a leader in public works educational materials, has some good text books.

In summary, an ATAPW degree will be awarded upon successful completion of a minimum of 90 credits in courses numbered 100 or above. For more details on this new exciting program contact:

Dorna Bullpitt, South Puget Sound Community College at (360) 754-7711 ext. 207
Ed Carlson, P.E., Bates Technical College at (206) 596-1504
George Crommes, P.E., Northwest T² Center at (360) 705-7390•



Back to School

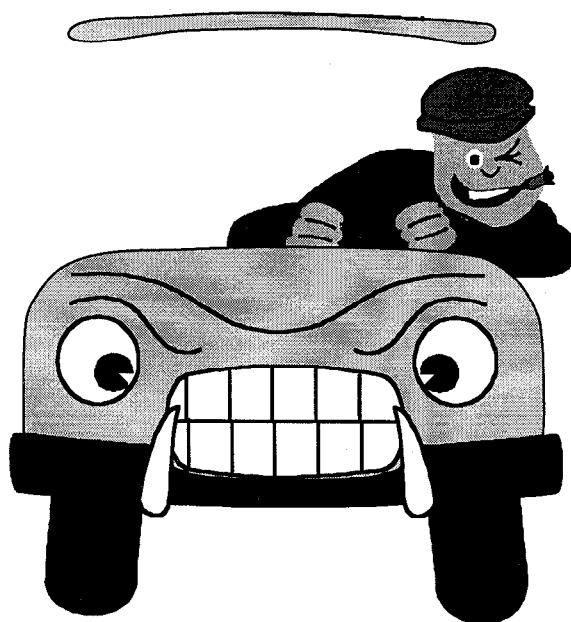
Dramatic Increase in Aggressive Driving

A study by the American Automobile Association Foundation for Traffic Safety shows a dramatic increase in violent traffic incidents over the past five years.

The study reports that since 1990, 10,037 violent crashes related to driving have occurred, resulting in 218 deaths and 12,610 injuries. The number of aggressive driving incidents increased from 1,129 reported in 1990 to 1,708 reported in 1995. If the pace continues, the AAA reports, the number of incidents could reach 1,800 this year (1996).

According to its study of news and police reports, most aggressive drivers are men, with only 4 percent occurring among women. Weapons involved in the incidents included guns, knives, clubs, and tire irons.*

Source: AASHTO Journal, Vol. 96, No. 43, November 8, 1996



USDOT Releases Study on Transportation for Elderly

With the adult population over age 65 growing to 53.2 million by the year 2000, the US Department of Transportation (USDOT) is developing a strategic plan on ways to enhance safety and mobility for older adults.

Launched by USDOT Secretary Federico Peña in December 1995, the study released in January 1997 was initiated by convening five expert panels that analyzed transportation issues facing older adults in all the transportation modes. The next step in the process will be the development of specific recommendations, relative priorities, and budget estimates.

Relative to highway safety, with an additional 20 million older adults by the year 2020, traffic deaths could increase by 45 percent or more. The fatality rate per 100 million vehicle miles traveled increases steeply for persons over 80.

While pedestrians over age 70 are only 9 percent of the population, they account for 19 percent of pedestrian fatalities, higher than any other age group.

Based on these findings, USDOT concluded that three policy objectives should guide a strategic plan for the nation's transportation system: safety; individual personal

mobility; and facilitating the eventual transition to mobility alternatives. Recommendations would include:

- 1 Having people operate cars as long as they can safely do so,
- 2 Promoting technology and training to assist people in operating vehicles safely,
- 3 Improving screening techniques to detect when people should no longer be operating vehicles,
- 4 Bringing new emphasis to nondriving alternatives for older adults, and
- 5 Educating the public on how to maintain safety and what to prepare for in older age.

As part of the project, USDOT is now preparing a Preliminary Older Driver and Highway Safety Handbook for distribution to highway engineers and community planners. In addition, research is underway at the National Highway Traffic Safety Administration on improved screening techniques for the safety of older drivers.*

Source: AASHTO Journal, January 17, 1997

High Performance Concrete Regional Showcase

August 18, 19, 20, 1997

Hyatt Regency Bellevue — Bellevue, Washington

Anticipated Topics

- HPC Material Properties and Long-Term Performance
- HPC Girder Mix Design, Testing, Fabrication, and Transportation
- Instrumentation, Monitoring, and Evaluation of Results
- Benefits and Applications of HPC
- HPC Bridge Deck Characteristics

Speakers: Practicing engineers from government, academia and industry will share information and experiences on the design and construction of HPC projects.

Exhibits: FHWA's HPC Mobile Laboratory will be on display for the duration of the showcase. FHWA technicians will demonstrate state-of-the-art technology for materials selection, mix design, and laboratory and field testing.

Field Trip: An important feature of this showcase will be a field review of a recently constructed three-span, continuous prestressed girder bridge. By using HPC, engineers reduced the number of girders needed from seven to five.

For additional information or to register, contact:

William P. Carr, WSDOT, PO Box 47350, Olympia, WA 98504-7350, (360) 705-7802, Fax (360) 705-6823, bcarr@wsdot.wa.gov

Barry Brecto, FHWA, Suite 501, Evergreen Plaza, 711 Capitol Way, Olympia, WA 98501, (360) 753-9482, Fax (360) 753-9889, Barry.Brecto@fhwa.dot.gov



Now Available on Video Tape Through the Northwest T² Center

Dan Burden's

Walkable Communities: Designing for Pedestrians

A video presentation of the workshop held on October 10, 1996, at the Footprints and Bike Tracks Pedestrian and Bicycle Safety Conference in Seattle, Washington

This video presentation will be enjoyed by any persons interested in increasing the walkability of their city streets and business districts, parks, schools, and neighborhoods. The tapes may be of special interest to engineers, designers, and planners; transit officials; school transportation officials; architects and landscape architects; mayors and city council members, neighborhood associations and others interested in pedestrian facility design. The 5½-hour set of four tapes can be purchased for \$75 through the Northwest T² Center, Washington State Department of Transportation. In addition, tapes can be borrowed by local agencies.

The videos cover:

- Key pedestrian planning issues.
- Ways to make intersections work better for pedestrians and motorists.
- Key requirements of the Americans with Disabilities Act.
- Designs that can make midblock crossings easier and safer.
- Traffic calming techniques that benefit pedestrian movement.
- Common pedestrian-motor vehicle crash types and ways to reduce them.
- Ways to increase the viability of business districts by considering the pedestrian.

For further information, call Laurel Gray of the Northwest T² Center at (360) 705-7386.

Yes, please send me _____ copy/copies of Dan Burden's Walkable Communities videotape.

Name _____ Phone _____

Agency _____ Fax _____

Address _____

City/State/Zip _____

Enclose check for \$75 (in U.S. funds) for each set ordered. Make check payable to WSDOT.

Mail to: Laurel Gray, NWT² Center
WSDOT/TransAid
PO Box 47390
Olympia, WA 98504-7390

Exemplary Road Workers Recognized

by George Crommes, P.E.

At the recent 34th Annual Road and Street Maintenance Supervisor's Schools, "Road Schools," transportation maintenance employees were recognized and awarded for their work. The road schools are sponsored by Washington State University and managed by WSU's conferences and institutes.

Recognized for exemplary services were the following individuals:

- ★ **Don Huret**, Maintenance Technician for Thurston County — "Don demonstrates his knowledge of the vegetation field by his timely completion of projects with little supervision" ... Richard Weston, Road Maintenance Manager.
- ★ **Bob Steele**, Equipment Mechanic for WSDOT Southwest Region — "His knowledge, skills, and abilities are consistently rated way above average not only by his supervisor, but his customers as well" ... Ken Kirkland, Operations Engineer.
- ★ **John Eaton**, Senior Maintenance Technician for Thurston County — "His work and equipment operating skills have consistently been excellent" ... Dick Weston, Road Maintenance Manager.
- ★ **Kelly Heathman**, Equipment Parts Specialist for WSDOT, Northwest Region — "Kelly's ideas have brought us up to date in the parts department and have made us a model for the rest of the TEF part rooms statewide" ... Tom Lentz, Maintenance Engineer.
- ★ **Lawrence Craig**, Senior Maintenance Technician for Thurston County — "Larry has shown himself to be an excellent operator as well as trainer and always goes the extra mile with regards to his job" ... Richard Weston, Road Maintenance Manager.
- ★ **Rick Masser**, Leadperson for City of Vancouver — "During his years of service, Rick has become a well versed maintenance person by taking advantage of training and career opportunities" ... Bob Eichhorst, Public Works Supervisor.
- ★ **Dennis Ohl**, Street Superintendent for the City of Ephrata — "He cares about his community and how his city is viewed by others. He takes great pride in his work and earns the respect of his crew" ... Jim Cherf, City Manager.



- ★ **Charles Slager**, Maintenance Supervisor for WSDOT North Central Region — "Charlie, known as 'Mr. Highways,' earned the respect of the public and his coworkers for the way he and his crew maintained a section of SR 12 known as Pine Canyon" ... Robert Stowe, Maintenance Engineer.
- ★ **Lyle Perry**, Maintenance Tech 2 for WSDOT Eastern Region — "Whatever the challenge, Lyle is always the first to get started and the first to come up with creative ideas on how to go about successfully accomplishing any given task" ... Larry Chatterton, Assistant Regional Administrator.
- ★ **Tom Oja**, Equipment Repair Supervisor for Clark County Department of Public Works — "Tom's experience in light and heavy mechanics and his ability to effectively communicate with peers, subordinates, and customers has led to this 1996 Distinguished Service Award" ... Clark County Operations Division.
- ★ **Craig Armstrong**, Area Supervisor for Okanagon County Public Works — "I believe that this gentleman has been an excellent father, husband, friend, community supporter, coworker, and dedicated employee for over 37 years that he has worked for the county" ... Joseph Nott, Deputy Director.
- ★ **Tom Kelly**, Leadperson for WSDOT South Central Region — "Tom, a 12-year employee, has earned the respect of his supervisors, local residents, and officials, peers, and coworkers" ... Kathy Eldred, Maintenance Assistant.

Congratulations to all of these individuals and thanks to WSU for promoting these awards. •

ARTBA Releases a New Safety Management Manual

ARTBA has just published a revised edition of its bestselling "Construction Safety Management Manual." The new edition updates the ARTBA manual first published two years ago.

The new 329-page publication includes first-ever chapters on personal protective equipment, excavation, how to buy insurance and dealing with employee substance abuse. It also updates previously published chapters on the OSHA checklist, "One Call" numbers, fall prevention rules and model confined space entry plans.

Hole-punched update kits for the original manual are available to ARTBA members for \$25 per set (\$50 for nonmembers). The complete and revised manual is available to members for \$80 per copy (\$150 for nonmembers). The price includes all shipping and handling fees.

Contact American Road and Transportation Builders Association, the ARTBA Building, 1010 Massachusetts Avenue NW, Washington, D.C. 20001, telephone (202) 289-4434.

Source: ARTBA Newsletter, July 31, 1996

The Latest on Management Systems

The Federal Highway Administration and the Federal Transit Administration have issued a final rule that removes the management system certification and sanction requirements for highway pavement; bridges; highway safety; traffic congestion; public transportation facilities and equipment; intermodal transportation facilities and systems; and system for monitoring highway and public transportation facilities and equipment. The rules, effective January 21, 1997, is a result of the National Highway System Designation Act, which eliminated the management systems and made them optional for states. Planning process in Transportation Management Areas must continue to include a congestion management system, however.

Federal Register, page 67166

Changes Made to the Emergency Relief Program

The FHWA has issued a final rule which amends its regulation on the emergency relief (ER) program to extend the time period in which the federal share payable for certain eligible emergency repairs is 100 percent from 90 days to 180 days. In addition, the final rule increases the limit for total obligations for ER projects in the Virgin Islands, Guam, American Samoa, and the Commonwealth of Northern Mariana Islands from \$5 million to \$20 million; changes the term "federal-aid highway systems" to "federal-aid highway" and adds various statements clarifying eligible uses of ER funding. The effective date of the final rule is January 21, 1997.

Source: AASHTO Regulatory Monitor, Vol. XVII, January 1, 1997

Work Smarter Not Harder: by Expanding Your Knowledge

Use WSDOT's Library – A Free T² Resource

Information on Transportation:

- ❖ Planning
- ❖ Design
- ❖ Management
- ❖ Construction
- ❖ Maintenance
- ❖ Materials

Call (360) 705-7750



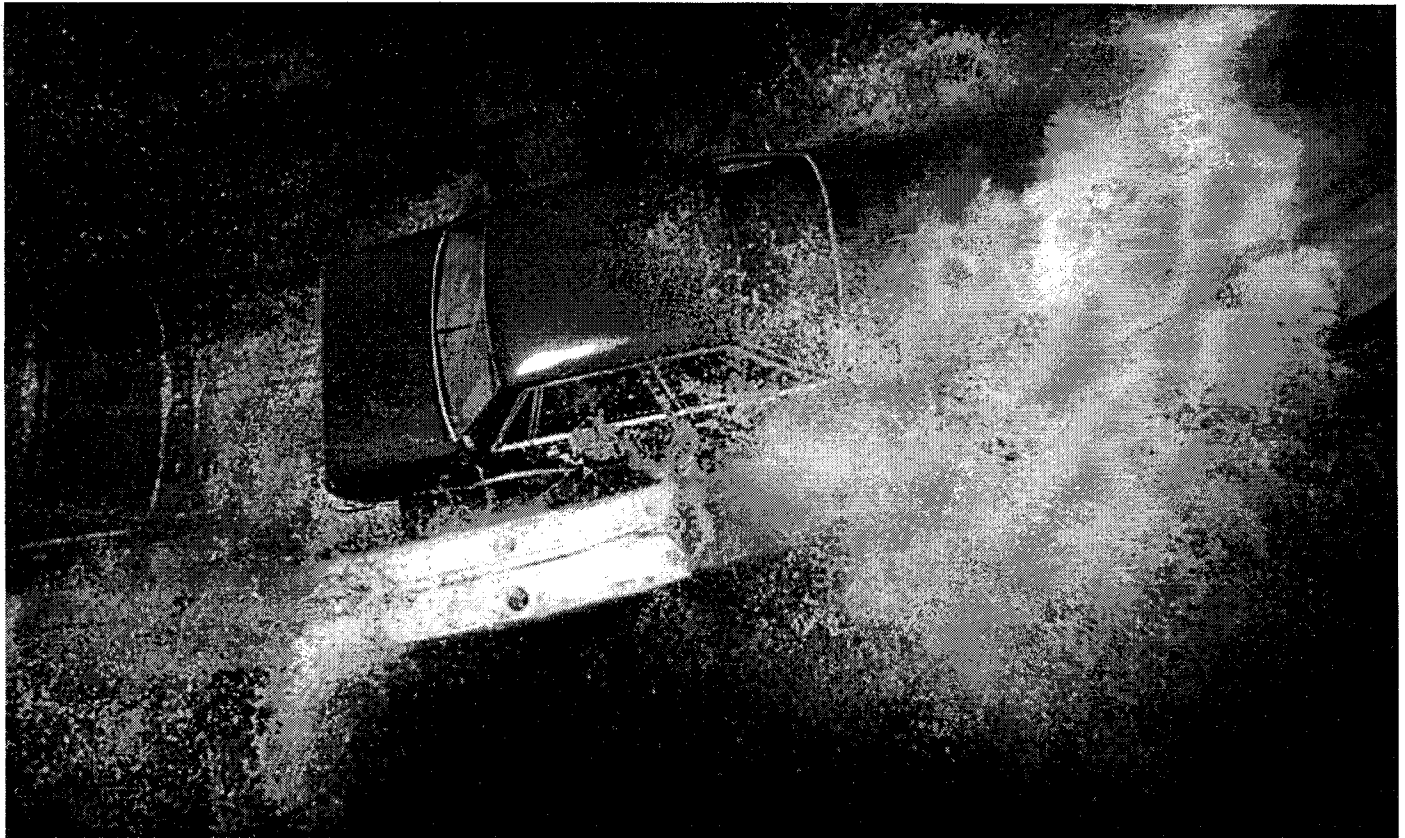
Working Safely Under Emergency Conditions



Public employees have often found themselves working long hours in particularly difficult and dangerous conditions, for example, when experiencing floods and landslides. These conditions often place employees at particular risk at a time when they are already overworked, sleep deprived and under undue pressure to provide extraordinary service expected by the public.

During the 1996 floods, employees have noted several very serious personal injury misses. Please take the time to identify and discuss each job site risk factor with the crew before beginning work. The following are a few items to discuss. What others can you identify?

- ☐ Be aware of sudden and potentially dangerous changes in water levels.
- ☐ Use extreme caution around areas that may be eroded.
- ☐ Use caution when operating heavy equipment on unstable ground.
- ☐ Be aware of the potential of downed power lines and falling poles and trees.
- ☐ Use a spotter to watch changing water conditions and for additional mud and rock slides when working in slide areas.
- ☐ Have good and adequate lighting when working at night.
- ☐ Establish and maintain good traffic control.
- ☐ Establish and maintain a buffer space around work areas.
- ☐ Establish escape routes beforehand.
- ☐ Maintain good communication with coworkers.
- ☐ Don't place yourselves at undue risk attempting to be a hero.
- ☐ Supervisor's — know your employees limits and respect these limits. Excessively overworking results in increased risk for all. •



Understanding Individual Productivity

by George Crommes, P.E.

This brief paper on productivity cannot replace the numerous text books written on the subject. My hope is that you may learn to recognize key things that affect productivity in your agency and to ask whether you can improve upon those which you control. This writing is a brief and simplistic presentation of a complex subject.

As shown on the figure, the beginning point for considering productivity improvements is the agency's environment. However, I will start with the end-product, productivity, and works back though the figure to the beginning point, the agency's environment.

Productivity is affected by two major things: the employee's job performance and the technological development available for his use. Technological development includes proper raw materials, equipment, methods and processes, and job layout. Usually, an agency has good control on the "technological development." Job performance is more complex. As shown in the figure, it is affected by many items starting with the organization's structure, policies, and work climate.

Working backwards on the figure below from the box labeled "employee's job performance," we see that this is affected by two things: (1) the employees abilities, skills, and knowledge and: (2) the employee's motivation. Any improvement in either one of these should improve the employee's job performance and, hence, productivity. For

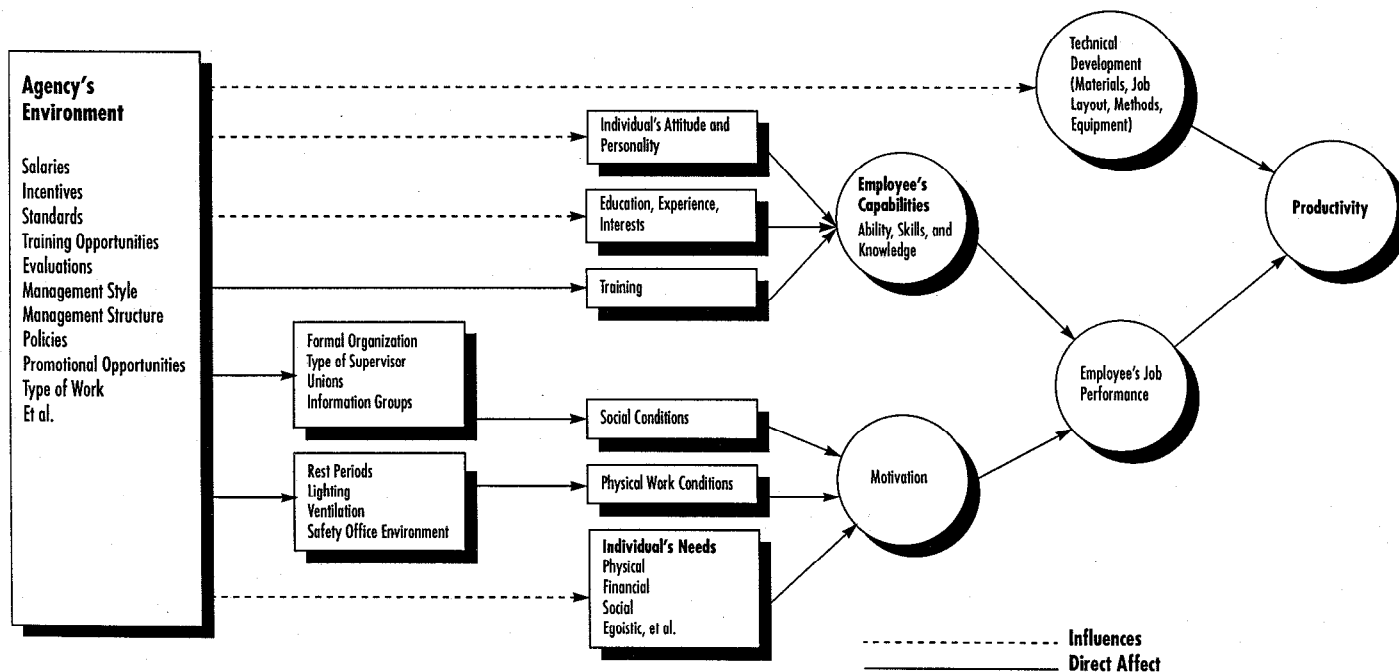
example, training can improve the employee's skills as well as improve his motivation, because he feels that the agency "cares enough" to provide training.

Motivation of the employee is affected by the social and physical conditions of the job/office as well as his/her social, financial, physical, and egoistic needs. Hence, improvements to the social and physical needs at the work place and recognition of the individuals needs can help motivation and improve productivity.

The employee's capabilities (ability, skills, and knowledge) can also be improved by providing quality work experiences, promoting additional education, and by providing training opportunities. This impacts the employee's job performance which affects productivity.

An individual's attitude and personality impacts his capabilities. Personalities and attitudes can be improved. The agency's environment influences these. An open, team-oriented, democratic work environment can have a very positive effect on an employee's attitude and even his personality. These, in turn, affect the employee's capabilities, which affect his job performance, which affect productivity.

Finally, the agency's environment, as shown on the figure, is the beginning point for considering productivity improvements. The agency's environment impacts or influences everything that I've already discussed. •

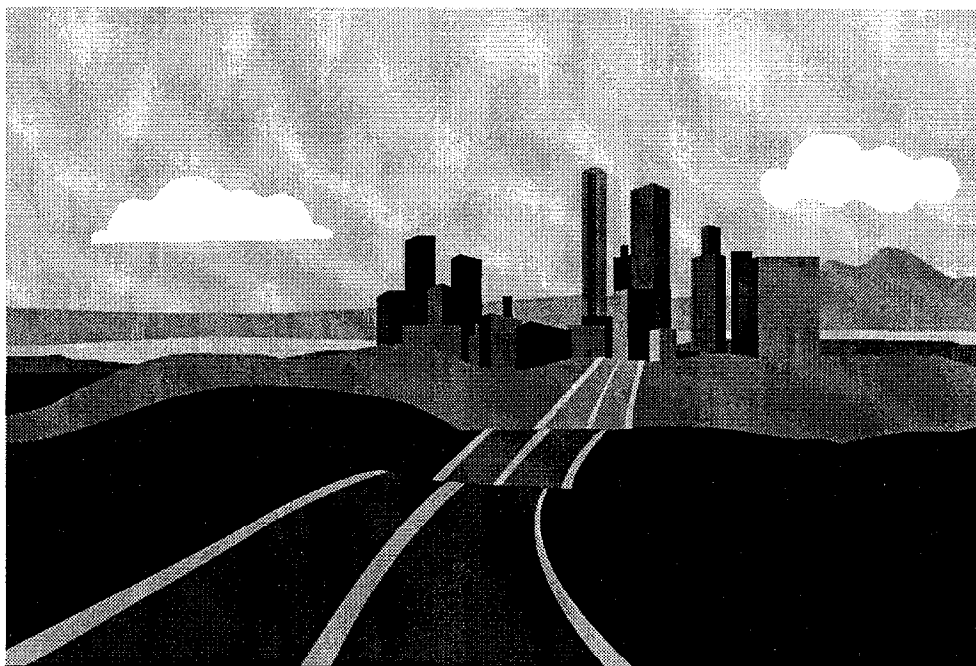


48th Annual

Road Builders' Clinic

March 11-13, 1997

Coeur d'Alene Resort
Coeur d'Alene, Idaho



Register today by phone...registration materials will follow in December.
Conferences and Institutes, Washington State University, PO Box 645222,
Pullman, Washington 99164-5222, 1-800-942-4978, 509-335-3530.

Early registration fee: \$199.00
Late registration fee: \$219.00
At-the-door registration: \$239.00
Vendor registration: \$325.00

- Panel: Flooding Revisited: FHWA, WA Emergency Mgt., Military Dept., FEMA, WA State Dept. of Fish & Wildlife, Asotin County
- Ethics in Public Works
- ITS Technologies & Innovations
- Karen Zucco-Gatlin, Washington State University: "Psychogeometrics—Understanding Yourself and Others"
- Funding & Financing Elements
- Design & Maintenance of Roadways

Coeur d'Alene Resort
(1-800-688-5253)

Park Wing: \$65/sng, \$75/dbl, \$85/trpl*

Deluxe Tower (view rooms):

\$99/sng, \$120/dbl, \$130/trpl

*Note: A limited number of rooms are available at these rates. Tax will be waived with use of approved government I.D. card.

Transportation and Land Use Issues Examined

The Urban Land Institute has released a new publication that puts transportation issues in the context of regional land use and development decisions, with examples of regions that have dealt effectively with traffic growth.

The new publication, titled *Moving Beyond Gridlock: Traffic and Development*, was written by Robert T. Dunphy, Rosenbloom, and Andre Bald.

The report examines the causes of traffic growth in the 1980s, the declining investment in transportation, and other factors which have contributed to congestion. It also studies the patterns of development of real estate and major transportation projects.

Population, aging, gender, regional population shifts, suburban population shifts, and labor force changes are also explored relating to expanding transportation needs.

Finally, the report seeks to identify "lessons" learned from the transportation growth experience of several cities

including Portland, Atlanta, Phoenix, St. Louis, Toronto, San Diego, and Houston.

The report concludes that solutions to traffic problems are not "off the shelf" commodities, but must be tailored to each community's perceptions, needs, and willingness to provide for growth. Measures of "success" might include a reduction in congestion and harmony between planning and transportation policies. All success is "temporary" the study warns, requiring continual vigilance for accommodating change.

Copies of the publication are available from the Urban Land Institute at a cost of \$35.95 for members and \$49.95 for nonmembers. To order, please call 1-800-321-5011.

Source: AASHTO Journal Vol. 97, No. 4, January 24, 1997

Free Publications From Your T² Center

For Washington recipients only.

Name _____

Agency _____

Address _____

City and Zip _____

Phone _____

Check those items you would like to order.

- ☐ LTAP News, 1993
CD ROM listing of major articles from T² Center newsletters from across the country. Must have Microsoft Windows, a CD ROM drive, and color monitor (IBM compatible only).
- ☐ Highway Utility Guide, FHWA
- ☐ Traffic Conflict Techniques for Safety and Operations — Observers Manual, FHWA 1989
- ☐ Scrap Tire Utilization Technologies, NAPA
- ☐ State-of-the-Art Survey of Flexible Pavement Crack Sealing Procedures in the United States, CRREL (1992)
- ☐ Maintenance of Aggregate and Earth Roads, NWT² Center (1994 reprint)
- ☐ International State-of-the-Art Colloquium on Low-Temperature Asphalt Pavement Cracking, CRREL
- ☐ The Engineer's Pothole Repair Guide, CRREL
- ☐ Geotextile Selection and Installation Manual for Rural Unpaved Roads, FHWA
- ☐ Municipal Strategies to Increase Pedestrian Travel, Draft 1994, Rhys Roth, Energy Outreach Center
- ☐ Guide to Safety Features for Local Roads and Streets, FHWA (1992)
- ☐ Family Emergency Preparedness Plan, American Red Cross, et al.
- ☐ Fish Passage Thru Culverts, USDA, FHWA, 1990
- ☐ Local Low Volume Roads and Streets, ASCE, 1992
- ☐ Snow Fence Guide, SHRP
- ☐ The Superpave System — New Tools for Designing and Building More Durable Asphalt Pavements, FHWA
- ☐ A Guide to the Federal-Aid Highway Emergency Relief Program, USDOT, June 1995
- ☐ Asphalt Seal Coats, T² WSDOT
- ☐ Pothole Primer — A Public Administrative Guide, CRREL, 1989
- ☐ Manual of Practice for an Effective Anti-Icing Program, FHWA, 1996
- ☐ Proceedings, National Conference on Work Zone Safety, FHWA, ARTBA, et al., 1994

Workbooks and Handouts from T² Center Workshops

- _____ Planning and Implementing Pedestrian Facilities in Suburban and Developing Rural Areas, TRB 1987
From the workshop "Walkable Communities: Designing for Pedestrians"
- _____ Handbook for Walkable Communities, by Dan Burden and Michael Wallwork
From the workshop "Walkable Communities: Designing for Pedestrians"
- _____ Traffic Calming: A Guide to Street Sharing
From the workshop "Walkable Communities: Designing for Pedestrians"
- _____ Techniques for Pavement Rehabilitation
From the workshop
- _____ Geosynthetic Design and Construction Guidelines, NHI, 1995
From the workshop "Geosynthetic Engineering Workshop"
- _____ Planning, Design, and Maintenance of Pedestrian Facilities, FHWA, 1989

Brief (One-to ten-page) Handouts

- _____ Asphalt Pavement Recycling, Crommes, Montague, 1993
- _____ Eye and Face Protection: Safety Goggles, Parlay, 1991
- _____ Individual Productivity — Understanding What Makes It Happen, Crommes, 1994
- _____ Know the Dangers of Confined Spaces, Parlay, 1991
- _____ Mitigating Road Hazards, Crommes, 1991
- _____ Operator Daily Maintenance of Motor Graders, Adapted from LAT² Center, 1989
- _____ Roadway Safety: Where Does it Rank on Your List of Priorities?, Penn T², 1992
- _____ Standing on Your Own Two Feet: And Other Reasons to Use Foot Protection, Parlay, 1991
- _____ Tool Tips — Working Safely with Hand and Portable Power Tools, Parlay, 1991
- _____ Tips for Reducing Tort Liability (articles from various sources), 1992
- _____ How to Coach a Winning Team, Louisiana State University
- _____ Depression is Serious Business, Parlay, 1991
- _____ Respiratory Protection, Maintaining Your Respirator, Parlay, 1991
- _____ SHRP's New Work Zone Safety Devices — The Intrusion Alarm, SHRP, 1992
- _____ Think Snow — Now!, Adapted from Utah T², 1990
- _____ Do You Communicate When you Talk?, NACE and LAT² Center
- _____ The (WA) Law on Hard Hats, NWT², 1993
- _____ Standing By at a Confined Space, Parlay, 1991
- _____ The Ten Commandments of Political Engineering, CAT² Center, 1992
- _____ HITEC (Highway Innovative Technology Evaluation Center) Brochure, 1996

**Orders may be faxed, mailed,
or phoned to Laurel Gray**
Phone: (360) 705-7386,
Fax: (360) 705-6858
Mailing Address: NWT² Center,
WSDOT/TransAid, P.O. Box 47390,
Olympia, WA 98504-7390

A Liability Checklist for Local Highway Agencies



If you can answer YES to the following questions, your agency will be in a good position to defend itself against a tort liability suit. If you have other concerns add them, and share this checklist with others including your elected officials who may add others.

Training Issues

- ☐ Do all employees receive proper training for the work they do and for the equipment they use?
- ☐ Do employees understand the importance of using reasonable care in performing their duties?
- ☐ Are employees instructed in reporting hazardous conditions and how to act on them?

Signage Issues

- ☐ Do we have an up-to-date copy of the Manual of Uniform Traffic Control Devices (MUTCD)?
- ☐ Are employees familiar with the MUTCD and are traffic signs and marking adequate and properly installed?
- ☐ Do we have an up-to-date inventory of traffic signs, signals, markings, and a plan for bringing them to conformance with the MUTCD as soon as possible?
- ☐ Do we have a policy for periodically inspecting signs, signals, and markings, and a system for reporting and correcting problems?
- ☐ Are curves and other road hazards posted with advisory speed limits based on the MUTCD?
- ☐ Are all bridges properly posted for weight restrictions and clearances?
- ☐ Are all roadways and railroad crossings properly signed?
- ☐ Do we properly sign and delineate workzones as per the MUTCD?

Roads, Culverts, and Bridges in General

- ☐ Do we have an up-to-date inventory of road, culvert, and bridge deficiencies and a written plan for correcting them?
- ☐ Are all roads and streets properly recorded and were proper procedures followed for declaring them as minimum maintenance, seasonal use only, abandoning them, or accepting them as new?
- ☐ Do we have information about the rights-of-way on our roads?
- ☐ Do we keep good records on highway activities including roadway conditions, accidents, and maintenance work?
- ☐ Have we adopted standards in road design, construction, operations, and maintenance? Are programs in place to implement them?

Administrative Issues

- ☐ Do we have a procedure for receiving complaints, acting on them, and recording all actions?
- ☐ Do we have a duly-adopted traffic ordinance and is it up-to-date?
- ☐ Is our equipment in good repair and are employees instructed to report faulty equipment immediately?
- ☐ Do we have a policy on snow and ice control?
- ☐ Are we properly insured?•

Adapted from the Vermont Local Roads T² Program, "Reducing the Risks of Tort Liability for Roads," Fact Sheet

Opportunities to Enhance Your Skills

For more information, contact the training provider listed. For additional training needs contact the Northwest T² Center at (360) 705-7386.

Classes and Workshops

NWT² Center, WSDOT
(360) 705-7386, Fax (360) 705-6858

Spring roadshows begin in March. Contact John Easley, the roadshow trainer at (360) 705-7385, or call the T² Office.

Statewide Bridge Supervisor's Meeting. March 18-20, WSDOT Selah Maintenance Facility. No fee.

WSDOT, Staff Development Training Opportunities Via T² Center
(360) 705-7386, Fax (360) 705-6858

Call Laurel Gray in the T² Center to register.

If the class is full or not scheduled at this time your name can be put on a request list for future classes.

Asphalt Emulsions and Chip Seals in Highway Maintenance (A05). May 6, Seattle; May 8, Vancouver; May 13, Spokane. No fee.

Asphalt Pavement Repair Workshop (AX6). May 14, Spokane. No fee.

Certification in Construction Site Erosion and Sediment Control (BPW). Mar 18-19, Seattle. No fee.

Contract Special Provision Writing (BGN). May 13, Yakima; May 15, Spokane. More classes will be scheduled. No fee.

Project Development and Environmental Documentation (A61). March 20-22, Seattle. \$120.

PS&E Contract Preparation (A4J). February 25-26, Spokane; June 17-18, Seattle. No fee.

Traffic Barriers and Impact Attenuators (A3I). March 25-26, Seattle; April 1-2, Vancouver. No fee.

Workzone Traffic Supervisor's Seminar-Refresher (BQD). April 1, Seattle. \$120.

WSDOT Environmental and Engineering Services
Contact Jim Sundahl at (360) 705-7483

Certification in Construction Site Erosion and Sediment Control (BPW). March 11-12, Wenatchee; March 18-19, Seattle. For contractors, consultants, and local agencies dealing with state contracts. \$100.

OSHA Training Center
(800) 326-7568,
Fax (206) 685-3872

OSHA Standards for the Construction Industry, OSHA 510. May 5-8, Seattle OSHA Training Center. Bring a current copy of OSHA Construction regulation. 29 CFR 1926 to class. \$525. 4 days.

Trainer Course, OSHA Standards for the Construction Industry, OSHA 500. May 12-May 15, Seattle, OSHA Training Center; March 17-20, Portland Community College. Prerequisites include successful completion of course 510, and five years of construction safety experience. Bring a current copy of OSHA Construction regulation. 29 CFR 1926 to class. \$525.

Trainer Course, OSHA Standards for General Industry, OSHA 501. June 9-12, Seattle OSHA Training Center; April 7-10, July 21-14, Portland Community College. Bring a current copy of OSHA Regulation. 29 CFR 1910 to class. \$525.

University of Washington Engineering Professional Programs
(206) 543-5539

EIT Refresher. Mondays and Wednesdays 6:30-9:00 p.m. February 24-April 2, 1997.

CE Refresher Course. Tuesdays and Thursday 7-9:30 p.m. March 4-April 8, 1997.

Successful Negotiation Skills in Construction Projects: The Key to Obtaining the Best Results and Avoiding Disputes. March 11. \$165 (early registration), \$185.

Storm and Surface Water Monitoring. April 16, 17. \$315 (early registration), \$345.

Achieving Real Success as a Project Manager. May 6 and 7. \$315 (early registration), \$345.

Design and Retrofit of Culverts in the Northwest for Fish Passage. May 14 and 15. \$315 (early registration), \$345.

Use of Constructed Wetlands for Improving Stormwater Quality. June 10 and 11. \$315 (early registration), \$345.

Continued on page 14

Innovations in Municipal Anaerobic Sludge Digestion: Design, Operations, Meeting 503 Regulations. June 17 and 18. \$325 (early registration), \$355.

Effective Maintenance Management. Tools to improve productivity, reliability, and costs. May 14-16. \$795.

Basics of Project Management for Design Professionals. September 9, 11, and 16. \$180 (early registration), \$205.

Recent Advances in Municipal Wastewater Treatment: Doing More With Less. September 17 and 18. \$325 (early registration), \$355.

Effective Writing for Technical Professionals. September 18, 23, 25, 30 and October 2. \$300 (early registration), \$330.

Vehicle Replacement Strategies. March 21. \$285.

Fleet Maintenance Management. March 22. \$285

TRANSPPEED-UW
Call Keir Whitson
(206) 616-9094

Roadway Pavement Rehabilitation. March 18-20, Spokane.

Inspection of Existing Culverts. March 10-11, Seattle; March 13-14, Spokane. \$150.

Law Seminars International
(206) 621-1938

Washington Water Law. March 27-28, Seattle.

Wetlands Washington. March 8, Seattle.

National Institute-University of Nevada
(703) 235-0500

Pavement Distress Identification and Techniques for Rehabilitation and Design. April 28-May 8. University of Nevada, Reno. (The NWT² Center has a few workshop announcements for this workshop. You may also contact Ms. Hana Maier, NHI (703) 235-0500.) \$1,200 course fee.

ASCE
1-800-548-2723

Roadside Design. March 6-7, Seattle.

Fred Pryor Seminars
1-800-255-6139

Project Management. March 20, Bellevue; March 21, Everett; March 27, Kennewick; March 18, Olympia; March 17, Seattle; March 25, Spokane; March 19, Tacoma; March 24, Yakima; March 24, Beaverton; March 17, Portland. \$195.

Training the Trainer. June 24, Bellevue; June 23, Everett; June 19, Kennewick; June 25, Olympia; June 17, Seattle; June 20, Spokane; June 18, Tacoma; June 17, Wenatchee; June 18, Yakima; June 20 Beaverton; June 26, Portland. \$149.

Management Problems of the Technical Person in a Leadership Role. May 14, Bellevue; May 15, Everett; May 6, Kennewick; May 13, Olympia, May 7, Seattle, May 5, Spokane, May 8, Tacoma, May 7, Yakima, May 12, Portland. \$195.

Washington State Department of Personnel (DOP)
(360) 586-2720

Classes open to state and local agency personnel based upon space available. Some courses have a "charge back fee." Other classes are offered in Tri-Cities, Vancouver, Walla Walla, Wenatchee, and Yakima. Contact DOP for their latest catalog.

Supervisory Challenge Correspondence Course. Self-paced. Statewide.

Leadership Skills That Work. April 25, Olympia.

Project Management. March 20-21, Olympia.

Time Management. May 2, June 4, March 21, April 4, Olympia; May 21, Tacoma.

Entry Management Development Core Program-Phase 1. May 5-8, May 20-23, Olympia; March 3-6, Yakima; June 16-19, Spokane.

Violence in the Work Place. May 12, Olympia.

Internet Basics. March 11, 19, 28, April 4, 9, 25, May 2, 9 16, Olympia.

Evergreen Safety Council
(206) 382-4090
1-800-521-0778
Fax (206) 382-0878
<http://www.esc.org/>

Fire Safety and Emergency Response. March 3, Spokane; March 17, Portland.

Traffic Safety and Office Safety. March 4, Spokane; March 18, Portland.

Safety Committees and Safety Meetings. March 6, Seattle.

Continued on page 15

Lift Truck Instructor Certification.
March 10-14, Portland.

Flagger Recertification Class.
March 15, Seattle.

Flagger Instructor Certification.
March 27-27, Seattle.

Computer Programs

The following computer programs may be downloaded from the Internet at <http://www.wsdot.wa.gov/transaid>

Design Cost Estimate. A software database program that calculates cost projections based on standard items.

Materials Approval Tracking. A software program designed to track materials data, need, status, and approval of any materials sampling and documentation needed for approval.

HyperCalc. A shareware utility for converting between metric and English units.

Force Account Macros. A series of ready-made Excel spreadsheets and macros to save you time on daily force account calculations and reports, including wage and equipment rates.

APWA CAD Symbol Standards and Menus. A public domain program of standard AutoCAD symbols developed by the Washington Chapter of APWA for use with AutoCAD release 12.

Conferences and Meetings

47th Annual Road Builders' Clinic.
March 11-13, Coeur d'Alene, Idaho.

National Association of County Engineers. March 22-27, Birmingham, Alabama.

ACI Spring Conference "Concrete and the Environment."
April 6-11, Seattle. Contact ACI (810) 848-3795

APWA Spring Conference.
April 8-11, Doubletree Suites, Tukwila.

Technology Transfer and Research Conference. April 14-16, San Diego, California. Contact Sue Klekar (415) 744-2628.

North American No-Dig 1997 Trenchless Technology Conference.
April 18-21, Seattle. Contact NASTT (312) 644-0828.

North American Snow Conference.
April 27, 28, Kansas City, Missouri. APWA.

National Seminar on Advanced Composite Material Bridges.
May 5-7, Washington, D.C. (FHWA).

TRIBs 3D in Symposium and Workshop. May 18-21, Minneapolis, Minnesota.

WSAC Annual Conference. June 24-27, Downtown Red Lion, Spokane.

National Pavement Management Workshop. July 20-22, New Orleans, Louisiana. Sponsored by FHWA and LADOTD. Contact G. Jones (202) 366-1337 or James Lee (504) 379-1836

1997 International Highway-Rail Grade Crossing Safety Conference. July 19-23, Madison Hotel, Seattle. Contact (409) 845-5817.

8th International Conference on Asphalt Pavements Design, Construction, and Performance.
August 10-14, Seattle.

International City/County Management Association (ICMA) Annual Conference. September 14-17, Vancouver, B.C.

APWA Fall Conference (joint with Oregon). October 21-24, Red Lion, Columbia River, Portland, Oregon.

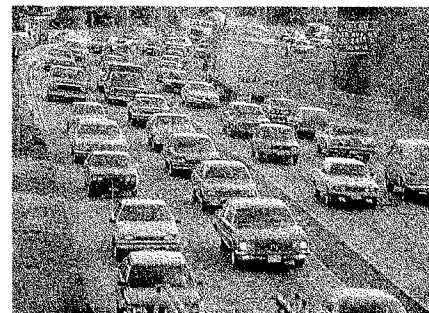
WSAC Legislative Conference.
November 12-14, West Coast Everett Pacific.

2nd International Conference Composites in Infrastructure.
January 5-7, 1998, University of Arizona.

National Study Shows Seattle with Sixth Worst Traffic Congestion

A recent study by the Texas Transportation Institute shows that the Seattle/Bellevue/Everett area is tied with Detroit as having the sixth worst traffic congestion in the nation. The study also estimates that Seattle area congestion costs the region \$1.3 billion per year in wasted time and fuel and costs the average person \$720 per year in wasted time and fuel. •

Source: WSDOT Home Page



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T² Web Site

<http://www.wsdot.wa.gov/transaid/nwt2.htm>

Toll Free Training Number

1-800-973-4496

A newsletter of the Local Technical
Assistance Program (LTAP)

Issue Number 53, Winter 96/97

Bulletin

The Technology Transfer Center (T²) Program is a nationwide effort financed jointly by the Federal Highway Administration (FHWA) and individual state departments of transportation. Its purpose is to translate into understandable terms the latest state-of-the-art technologies in the areas of roads, bridges, and public transportation to local highway and transportation personnel.

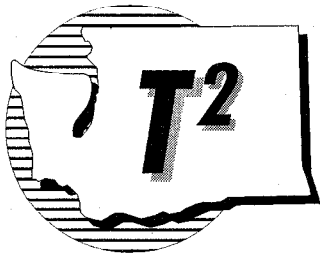
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**Washington State
Department of Transportation**
TransAid Service Center



U. S. Department of Transportation
Federal Highway Administration



Northwest Technology Transfer Center
WSDOT-TransAid Service Center
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